DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-016392 Address: 333 Burma Road **Date Inspected:** 22-Aug-2010

City: Oakland, CA 94607

OSM Arrival Time: 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: CWI Present: Yes Mr. Tian Lei / Mr. Huang min No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

Summary of Items Observed:

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY-2

This QA Inspector Randomly observed the following work in progress:

Submerged Arc Welding (SAW) of weld joint FB3321-001-008. Welder is identified as 045265. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-L2c-S-2.

Flux Cored Arc Welding (FCAW) of weld joint FB3334-002-007,008. Welder is identified as 045276. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

FCAW of weld joint FB3341-001-011,012. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

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FCAW of weld joint FB3345-001-009,010. Welder is identified as 045203. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

During random in process inspection of OBG member identified as FB3341-001 this QA observed an arc strike on Piece Mark (PCMK) identified as X4824A. This QA marked the affected area and informed ZPMC Quality Control (QC) indentified as Mr. Zhu Jun of this issue. Mr. Zhu Jun informed this QA that the arc strike would be corrected in a manner compliant with the contract documents. Refer the attached photos for reference.

BAY-3

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06276.

Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Floor beam weld Components. Total number of welds UT Tested: 03 No's. The weld designations are review as follows:

- 1. FB3285-001-001,002
- 2. FB3292-001-031

SAW of weld joint FB3206-001-001. Welder is identified as 062406. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-U3c-S-2.

FCAW of weld joint LD3030-001-049. Welder is identified as 044830. ZPMC Quality Control (QC) is identified as Mr. Zhang Yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2232-TC-U4b-F.

BAY-6

ZPMC personnel heat straightening OBG member identified as SP3125A. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Xia Yong Zheng was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) HSR1 (B) 9169.

SAW of weld joint CB3002H-018-002. Welder is identified as 054458. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-L2c-S-2.

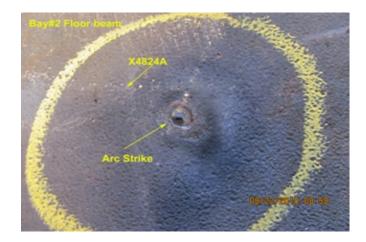
BAY-7

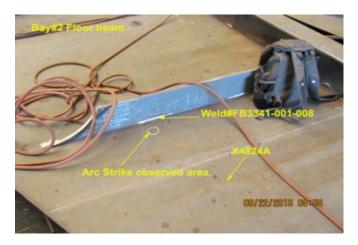
FCAW of weld joint FB4104-001-047. Welder is identified as 217185. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U5-F. Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract

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documents.





Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Prabhu,Surendra	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer